



U.S. Department of Energy

Categorical Exclusion Determination Form

Submit by E-mail

Proposed Action Title: Self-Regulating, Solid Core Block "SCB" for an Inherently Safe Heat Pipe Reactor

Program or Field Office: Advanced Research Projects Agency - Energy (ARPA-E)

Location(s) (City/County/State): Cranberry Township, Pennsylvania; Madison, Pennsylvania; Los Alamos, New Mexico

Proposed Action Description:

FOURTH AMENDED DETERMINATION (See attached original determination dated June 26, 2018, first amended determination dated July 23, 2018, second amended determination dated August 17, 2018, and third amended determination dated February 27, 2019.) This Amended Determination follows the approval of additional funds to support the project team's small-scale, research and development activities to include the automated production of an alkali metal heat pump system as part of an in-progress microreactor design. Specifically, the project team will (1) design, construct, and test the automated system, (2) construct and test the alkali heat pipe, and (3) combine components for use in the microreactor system. If successful, this project will support advanced reactor designs that achieve lower construction cost, enable autonomous operations while also improving safety, and increase the competitiveness of nuclear power. Project activities will be conducted at existing facilities at Westinghouse (Cranberry Township, PA and Madison, PA) and Los Alamos National Laboratory (Los Alamos, NM). Project tasks continue to fit within the class of actions identified under the DOE Categorical Exclusion identified below and do not involve any extraordinary circumstances that may affect the significance of the environmental effects of the project. This assessment was based on a review of the proposed scope of work and the potential environmental impact of the project. Project tasks will be conducted in accordance with established safety and materials/waste management protocols and pursuant to applicable Federal, State, and local regulatory requirements.

Categorical Exclusion(s) Applied:

A9 - Information gathering, analysis, and dissemination

B3.6 - Small-scale research and development, laboratory operations, and pilot projects

For the complete DOE National Environmental Policy Act regulations regarding categorical exclusions, including the full text of each categorical exclusion, see Subpart D of [10 CFR Part 1021](#).

Regulatory Requirements in 10 CFR 1021.410(b): (See full text in regulation)

The proposal fits within a class of actions that is listed in Appendix A or B to 10 CFR Part 1021, Subpart D.

To fit within the classes of actions listed in 10 CFR Part 1021, Subpart D, Appendix B, a proposal must be one that would not: (1) threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, or similar requirements of DOE or Executive Orders; (2) require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities; (3) disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; (4) have the potential to cause significant impacts on environmentally sensitive resources, including, but not limited to, those listed in paragraph B(4) of 10 CFR Part 1021, Subpart D, Appendix B; (5) involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species, unless the proposed activity would be contained or confined in a manner designed and operated to prevent unauthorized release into the environment and conducted in accordance with applicable requirements, such as those listed in paragraph B(5) of 10 CFR Part 1021, Subpart D, Appendix B.

There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal.

The proposal has not been segmented to meet the definition of a categorical exclusion. This proposal is not connected to other actions with potentially significant impacts (40 CFR 1508.25(a)(1)), is not related to other actions with individually insignificant but cumulatively significant impacts (40 CFR 1508.27(b)(7)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211 concerning limitations on actions during preparation of an environmental impact statement.

Based on my review of the proposed action, as NEPA Compliance Officer (as authorized under DOE Order 451.1B), I have determined that the proposed action fits within the specified class(es) of action, the other regulatory requirements set forth above are met, and the proposed action is hereby categorically excluded from further NEPA review.

NEPA Compliance Officer: **GEOFFREY GOODE** Digitally signed by GEOFFREY GOODE
Date: 2022.07.05 11:19:14 -04'00'

Date Determined: